L Number	Hits	Search Text	DB	Time stamp
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			EPO;	
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2	2926	N-acetylglucosamine	USPAT; US-PGPUB;	2003/11/28 15:49
			EPO;	
			DERWENT	
3	1370	N-acetylglucosamine and (implant\$ or elution)	USPAT;	2003/11/28 15:49
			US-PGPUB;	
			EPO;	
			DERWENT	000000000000000000000000000000000000000
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		deacetylat\$	US-PGPUB; EPO;	
			DERWENT	
5	170	((N-acetylglucosamine and (implant\$ or elution)) and	USPAT;	2003/11/28 15:54
	1.0	deacetylat\$) and process	US-PGPUB;	
			EPO;	
			DERWENT	
6	1121	N-acetylglucosamine and poly	USPAT;	2003/11/28 15:54
			US-PGPUB;	
			EPO; DERWENT	
7	638	(N-acetylglucosamine and poly) and (implant or elution)	USPAT;	2003/11/28 15:55
'	000	(if acctylgiacosamine and poly) and (implant or station)	US-PGPUB;	2000/11/20 10:00
			EPO;	
			DERWENT	
8	83	((N-acetylglucosamine and poly) and (implant or elution)) and	USPAT;	2003/11/28 16:06
		deacetylat\$	US-PGPUB;	
			EPO;	
9	481	536/55.2	DERWENT USPAT;	2003/11/28 16:06
٦	401	330/33.2	US-PGPUB;	2003/11/20 10:00
			EPO;	
			DERWENT	
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			EPO;	
11	40	(536/55.2 and N-acetylglucosamine) and poly	DERWENT USPAT;	2003/11/28 16:08
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			DERWENT	
12	3421	514/54	USPAT;	2003/11/28 16:08
			US-PGPUB;	
			EPO; DERWENT	
13	10	514/54 and polyglucosamine	USPAT;	2003/11/28 16:09
'`	'0	21 no i and porgudocamino	US-PGPUB;	_000,11720 10.09
			EPO;	
			DERWENT	
14	439	514/55	USPAT;	2003/11/28 16:09
			US-PGPUB;	
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			DERWENT	
16	14525	435/325	USPAT;	2003/11/28 16:11
			US-PGPUB;	
			EPO;	
	L <u> </u>		DERWENT	

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			EPO;	
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			EPO;	
			DERWENT	
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	1		DERWENT	
6	1121	N-acetylglucosamine and poly	USPAT;	2003/11/28 15:54
			US-PGPUB;	
			EPO;	
_	000	(A) and deliceration and well and Greek and the second from	DERWENT	000044/00 45 55
7	638	(N-acetylglucosamine and poly) and (implant or elution)	USPAT;	2003/11/28 15:55
			US-PGPUB; EPO;	
			DERWENT	
8	83	((N-acetylglucosamine and poly) and (implant or elution)) and	USPAT;	2003/11/28 16:06
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		,	EPO;	İ
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			EPO;	
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			DERWENT	
11	40	(536/55.2 and N-acetylglucosamine) and poly	USPAT;	2003/11/28 16:08
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			EPO;	
	0404	EAAIEA	DERWENT	000044500 10 0
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			US-PGPUB; EPO:	
			DERWENT	
13	10	514/54 and polyglucosamine	USPAT;	2003/11/28 16:09
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			EPO;	
			DERWENT	
14	439	514/55	USPAT;	2003/11/28 16:09
			US-PGPUB;	
			EPO;	
15	32	514/55 and polyglucosamine	DERWENT USPAT:	2003/11/28 16:11
	52	or noo and polygidoosamine	US-PGPUB;	2000/11/20 10.11
			EPO;	
			DERWENT	
16	14525	435/325	USPAT;	2003/11/28 16:11
	ļ		US-PGPUB;	
			EPO;	
			DERWENT	

17	270	425/225 and (malely compared on N. and dely compared	USPAT:	2003/11/28 16:12
17	379	435/325 and (polglucosamine or N-acetylglucosamine)		2003/11/20 10.12
			US-PGPUB; EPO:	
			,	
18	775	42E/22E and Caluacamina	DERWENT USPAT;	2003/11/28 16:12
10	//5	435/325 and \$glucosamine	US-PGPUB:	2003/11/26 10:12
			EPO;	
			DERWENT	
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			EPO;	
			DERWENT	
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			EPO;	
			DERWENT	
22	243	(polyglucosamine or N-acetylglucosamine) and biocompatible	USPAT;	2003/11/28 16:14
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			EPO;	
			DERWENT	

17		435/325 and (polglucosamine or N-acetylglucosamine)	USPAT;	2003/11/28 16:12
	379	+00/020 dira (poigracocarrille of 14 doctylglacocarrille)	US-PGPUB;	2000/11/20 10:12
	İ		EPO;	
			DERWENT	
18	775	435/325 and \$glucosamine	USPAT;	2003/11/28 16:12
1			US-PGPUB;	
			EPO;	
			DERWENT	
19	379	435/325 and (polyglucosamine or N-acetylglucosamine)	USPAT;	2003/11/28 16:13
İ			US-PGPUB;	
1			EPO;	
20	31	(425/225 and (natural consists of N. and delicens arises)) and	DERWENT	2002/44/00 40:40
20	31	(435/325 and (polyglucosamine or N-acetylglucosamine)) and biocompatible	USPAT; US-PGPUB:	2003/11/28 16:13
İ		biocompanible	EPO:	
			DERWENT	
21	3017	polyglucosamine or N-acetylglucosamine	USPAT:	2003/11/28 16:14
	00	polygrapoparimine of it aboty.	US-PGPUB;	2000/11/20 10:14
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			DERWENT	
22	243	(polyglucosamine or N-acetylglucosamine) and biocompatible	USPAT;	2003/11/28 16:47
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	}		DERWENT	

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FILE 'HOME' ENTERED AT 16:20:01 ON 28 NOV 2003

=> file polymers, biosis, embase, medline

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FULL ESTIMATED COST

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FILE 'WPINDEX' ENTERED AT 16:20:27 ON 28 NOV 2003

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=> s l1 and poly
          2294 L1 AND POLY
L2
=> s 12 and biocompat?
           430 L2 AND BIOCOMPAT?
Ъ3
=> s 13 and deacetyl?
            72 L3 AND DEACETYL?
L4
=> s 14 and (elution(w)test)
   1 FILES SEARCHED...
  21 FILES SEARCHED...
            19 L4 AND (ELUTION(W) TEST)
=> dis 15 1-19 bib abs
     ANSWER 1 OF 19 USPATFULL on STN
L_5
       2003:300814 USPATFULL
AN
TT
       Biocompatible poly-B-1 4-N-
       acetylglucosamine
IN
       Vournakis, John N., Hanover, NH, UNITED STATES
       Finkielsztein, Sergio, Chestnut Hill, MA, UNITED STATES
       Pariser, Ernest R., Belmont, MA, UNITED STATES
       Helton, Mike, Memphis, TN, UNITED STATES
       Marine Polymer Technologies, Inc. (U.S. corporation)
PA
PΙ
       US 2003212040
                          Α1
                               20031113
AΙ
       US 2003-386893
                          A1
                               20030312 (10)
       Continuation of Ser. No. US 2001-866827, filed on 29 May 2001, PENDING
RLI
       Continuation of Ser. No. US 1999-227840, filed on 11 Jan 1999, ABANDONED
       Division of Ser. No. US 1995-471290, filed on 6 Jun 1995, GRANTED, Pat.
       No. US 5858350 Continuation-in-part of Ser. No. US 1994-347911, filed on
       1 Dec 1994, GRANTED, Pat. No. US 5623064 Continuation-in-part of Ser.
       No. US 1993-160569, filed on 1 Dec 1993, GRANTED, Pat. No. US 5622834
DT
       Utility
FS
       APPLICATION
       PENNIE AND EDMONDS, 1155 AVENUE OF THE AMERICAS, NEW YORK, NY, 100362711
LREP
CLMN
       Number of Claims: 2
ECL
       Exemplary Claim: 1
DRWN
       57 Drawing Page(s)
LN.CNT 3721
AΒ
       The present invention relates to a purified, easily produced
       poly-.beta.-1.fwdarw.4-N-acetylglucosamine
       (p-GlcNAc) polysaccharide species. The p-GlcNAc of the invention is a
       polymer of high molecular weight whose constituent monosaccharide sugars
       are attached in a .beta.-1.fwdarw.4 conformation, and which is free of
       proteins, and substantially free of single amino acids, and other
       organic and inorganic contaminants. In addition, derivatives and
```

reformulations of p-GlcNAc are described. The present invention further

relates to methods for the purification of the p-GlcNAc of the invention from microalgae, preferably diatom, starting sources. Still further, the invention relates to methods for the derivatization and reformulation of the p-GlcNAc. Additionally, the present invention relates to the uses of pure p-GlcNAc, its derivatives, and/or its reformulations.

```
ANSWER 2 OF 19 USPATFULL on STN
L5
       2003:113493 USPATFULL
ΑN
TI
       Methods for treating a breach or puncture in a blood vessel
       Vournakis, John N., Charleston, NC, UNITED STATES
IN
       Finkielsztein, Sergio, Chestnut Hill, MA, UNITED STATES
PA
       Marine Polymer Technologies Inc., Danvers, MA, 01923 (U.S. corporation)
       US 2003078234
                          A1
                               20030424
PΙ
       US 2002-194740
                          A1
                               20020712 (10)
ΑI
       Continuation of Ser. No. US 2001-781182, filed on 12 Feb 2001, PENDING
RLI
DТ
       Utility
FS
       APPLICATION
       Pennie & Edmonds LLP, 1155 Avenue of the Americas, New York, NY,
LREP
       10036-2711
       Number of Claims: 25
CLMN
       Exemplary Claim: 1
ECL
DRWN
       39 Drawing Page(s)
LN.CNT 3051
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to compositions comprising
       semi-crystalline .beta.-1-4-N-acetylglucosamine
       polymers (p-GlcNac) and methods utilizing such polymers modulation of
       vascular structure and/or function. The compositions and methods
       disclosed are useful for stimulating, in a p-GlcNac concentration-
       dependent manner, endothelin-1 release, vasoconstriction, and/or
       reduction in blood flow out of a breached vessel, as well as for
       contributing to or effecting cessation of bleeding. The methods of the
       present invention comprise topical administration of materials
       comprising semi-crystalline p-GlcNac polymers that are free of proteins,
       and substantially free of single amino acids as well as other organic
       and inorganic contaminants, and whose constituent monosaccharide sugars
       are attached in a .beta.-1-4 conformation.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 3 OF 19 USPATFULL on STN
L5
       2002:198691 USPATFULL
AN
TI
       Methods and compositions for poly-beta-1-4-N-
       acetylglucosamine cell therapy system
ΙN
       Vournakis, John N., Hanover, NH, UNITED STATES
       Finkielsztein, Sergio, Chestnut Hill, MA, UNITED STATES
       Pariser, Ernest R., Belmont, CA, UNITED STATES
       Helton, Mike, Memphis, TN, UNITED STATES
PΑ
       Marine Polymer Technologies, Inc. (U.S. corporation)
PΙ
       US 2002106792
                          A1
                               20020808
       US 6649599
                          B2
                               20031118
                               20011205 (10)
       US 2001-5130
                          A1
AΙ
       Continuation of Ser. No. US 2001-866827, filed on 29 May 2001, PENDING
RLI
       Continuation of Ser. No. US 1999-227840, filed on 11 Jan 1999, ABANDONED
       Division of Ser. No. US 1995-471290, filed on 6 Jun 1995, PATENTED
       Continuation-in-part of Ser. No. US 1994-347911, filed on 1 Dec 1994,
       PATENTED Continuation-in-part of Ser. No. US 1993-160569, filed on 1 Dec
       1993, PATENTED
DT
       Utility
FS
       APPLICATION
LREP
       PENNIE AND EDMONDS, 1155 AVENUE OF THE AMERICAS, NEW YORK, NY, 100362711
CLMN
       Number of Claims: 2
       Exemplary Claim: 1
ECL
```

57 Drawing Page(s) DRWN LN.CNT 3786 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention relates to a purified, easily produced poly-.beta.-1.fwdarw.4-N-acetylglucosamine (p-GlcNAc) polysaccharide species. The p-GlcNAc of the invention is a polymer of high molecular weight whose constituent monosaccharide sugars are attached in a .beta.-1.fwdarw.4 conformation, and which is free of proteins, and substantially free of single amino acids, and other organic and inorganic contaminants. In addition, derivatives and reformulations of p-GlcNAc are described. The present invention further relates to methods for the purification of the p-GlcNAc of the invention from microalgae, preferably diatom, starting sources. Still further, the invention relates to methods for the derivatization and reformulation of the p-GlcNAc. Additionally, the present invention relates to the uses of pure p-GlcNAc, its derivatives, and/or its reformulations. CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 4 OF 19 USPATFULL on STN T.5 2002:185666 USPATFULL ANMethods and compositions for poly-beta-1-4-N TIacetylglucosamine cell therapy system Vournakis, John N., Hanover, NH, UNITED STATES IN Finkielsztein, Sergio, Chestnut Hill, MA, UNITED STATES Pariser, Ernest R., Belmont, CA, UNITED STATES Helton, Mike, Memphis, TN, UNITED STATES Marine Polymer Technologies, Inc. (U.S. corporation) PA20020725 PIUS 2002098579 A1 B2 US 6599720 20030729 US 2001-5139 Α1 20011205 (10) ΑI Continuation of Ser. No. US 2001-866827, filed on 29 May 2001, PENDING RLIContinuation of Ser. No. US 1999-227840, filed on 11 Jan 1999, ABANDONED Division of Ser. No. US 1995-471290, filed on 6 Jun 1995, PATENTED Continuation-in-part of Ser. No. US 1994-347911, filed on 1 Dec 1994, PATENTED Continuation-in-part of Ser. No. US 1993-160569, filed on 1 Dec 1993, PATENTED DTUtility FS APPLICATION PENNIE AND EDMONDS, 1155 AVENUE OF THE AMERICAS, NEW YORK, NY, 100362711 LREP CLMN Number of Claims: 2 Exemplary Claim: 1 DRWN 57 Drawing Page(s) LN.CNT 3794 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention relates to a purified, easily produced ABpoly-.beta.-1.fwdarw.4-N-acetylglucosamine (p-GlcNAc) polysaccharide species. The p-GlcNAc of the invention is a polymer of high molecular weight whose constituent monosaccharide sugars are attached in a .beta.-1.fwdarw.4 conformation, and which is free of proteins, and substantially free of single amino acids, and other organic and inorganic contaminants. In addition, derivatives and reformulations of p-GlcNAc are described. The present invention further relates to methods for the purification of the p-GlcNAc of the invention from microalgae, preferably diatom, starting sources. Still further, the invention relates to methods for the derivatization and reformulation of the p-GlcNAc. Additionally, the present invention relates to the uses of pure p-GlcNAc, its derivatives, and/or its reformulations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 5 OF 19 USPATFULL on STN

AN 2002:172344 USPATFULL

TI Methods and compositions for poly-beta-1-4-N-

```
acetylglucosamine cell therapy system
       Vournakis, John N., Hanover, NH, UNITED STATES
IN
       Finkielsztein, Sergio, Chestnut Hill, MA, UNITED STATES
       Pariser, Ernest R., Belmont, MA, UNITED STATES
       Helton, Mike, Memphis, TN, UNITED STATES
       Marine Polymer Technologies, Inc. (U.S. corporation)
PΑ
                                20020711
       US 2002091101
                           Α1
PΙ
       US 6630459
                           В2
                                20031007
       US 2001-5142
                                20011205 (10)
                           A1
AΙ
       Continuation of Ser. No. US 2001-866827, filed on 29 May 2001, PENDING Continuation of Ser. No. US 1999-227840, filed on 11 Jan 1999, ABANDONED
RLI
       Division of Ser. No. US 1995-471290, filed on 6 Jun 1995, PATENTED
       Continuation-in-part of Ser. No. US 1994-347911, filed on 1 Dec 1994,
       PATENTED Continuation-in-part of Ser. No. US 1993-160569, filed on 1 Dec
       1993, PATENTED
DT
       Utility
       APPLICATION
FS
       PENNIE & EDMONDS LLP, 1155 Avenue of the Americas, New York, NY,
LREP
       10036-2711
       Number of Claims: 2
CLMN
ECL
       Exemplary Claim: 1
DRWN
       57 Drawing Page(s)
LN.CNT 3712
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to a purified, easily produced
AB
       poly-.beta.-1.fwdarw.4-N-acetylglucosamine
       (p-GlcNAc) polysaccharide species. The p-GlcNAc of the invention is a
       polymer of high molecular weight whose constituent monosaccharide sugars
       are attached in a .beta.-1.fwdarw.4 conformation, and which is free of
       proteins, and substantially free of single amino acids, and other
       organic and inorganic contaminants. In addition, derivatives and
       reformulations of p-GlcNAc are described. The present invention further
       relates to methods for the purification of the p-GlcNAc of the invention
       from microalgae, preferably diatom, starting sources. Still further, the
       invention relates to methods for the derivatization and reformulation of
       the p-GlcNAc. Additionally, the present invention relates to the uses of
       pure p-GlcNAc, its derivatives, and/or its reformulations.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L5
     ANSWER 6 OF 19 USPATFULL on STN
       2002:32545 USPATFULL
ΑN
TI
       Compositions and methods for modulation of vascular structure and/or
       Vournakis, John N., Charleston, SC, UNITED STATES
IN
       Finkielsztein, Sergio, Chestnut Hill, MA, UNITED STATES
       Marine Polymer Technologies, Inc. (U.S. corporation)
PΑ
PI
       US 2002019367
                          A1
                                20020214
ΑI
       US 2001-781182
                          Α1
                                20010212 (9)
                           20000719
PRAI
       WO 2000-JP7832
       JP 1999-204808
                            19990719
DT
       Utility
FS
       APPLICATION
LREP
       PENNIE AND EDMONDS, 1155 AVENUE OF THE AMERICAS, NEW YORK, NY, 100362711
       Number of Claims: 25
CLMN
ECL
       Exemplary Claim: 1
DRWN
       39 Drawing Page(s)
LN.CNT 3057
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to compositions comprising
AB
       semi-crystalline .beta.-1-4-N-acetylglucosamine
       polymers (p-GlcNac) and methods utilizing such polymers modulation of
       vascular structure and/or function. The compositions and methods
```

disclosed are useful for stimulating, in a p-GlcNac concentration-

dependent manner, endothelin-1 release, vasoconstriction, and/or reduction in blood flow out of a breached vessel, as well as for contributing to or effecting cessation of bleeding. The methods of the present invention comprise topical administration of materials comprising semi-crystalline p-GlcNac polymers that are free of proteins, and substantially free of single amino acids as well as other organic and inorganic contaminants, and whose constituent monosaccharide sugars are attached in a .beta.-1-4 conformation.

# CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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ANSWER 7 OF 19 USPATFULL on STN
1.5
       2001:237691 USPATFULL
ΑN
TI
       Methods and compositions for poly-beta-1-4-N-
       acetylglucosamine cell therapy system
       Vournakis, John N., Hanover, NH, United States
IN
       Finkielsztein, Sergio, Chestnut Hill, MA, United States
       Pariser, Ernest R., Belmont, MA, United States
       Helton, Mike, Memphis, TN, United States
       Marine Polymer Technologies, Inc. (U.S. corporation)
PA
       US 2001055807
                               20011227
PΙ
                          A1
       US 6610668
                          B2
                               20030826
       US 2001-866827
                          A1
                               20010529 (9)
ΑI
       Continuation of Ser. No. US 1999-227840, filed on 11 Jan 1999, ABANDONED
RLI
       Division of Ser. No. US 1995-471290, filed on 6 Jun 1995, GRANTED, Pat.
       No. US 5858350 Continuation-in-part of Ser. No. US 1994-347911, filed on
       1 Dec 1994, GRANTED, Pat. No. US 5623064 Continuation-in-part of Ser.
      No. US 1993-160569, filed on 1 Dec 1993, GRANTED, Pat. No. US 5622834
DT
      Utility
      APPLICATION
FS
       PENNIE AND EDMONDS, 1155 AVENUE OF THE AMERICAS, NEW YORK, NY, 100362711
LREP
CLMN
      Number of Claims: 2
ECL
       Exemplary Claim: 1
DRWN
       57 Drawing Page(s)
LN.CNT 3784
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
```

AB The present invention relates to a purified, easily produced poly-.beta.-1.fwdarw.4-N-acetylglucosamine

(p-GlcNAc) polysaccharide species. The p-GlcNAc of the invention is a polymer of high molecular weight whose constituent monosaccharide sugars are attached in a .beta.-1.fwdarw.4 conformation, and which is free of proteins, and substantially free of single amino acids, and other organic and inorganic contaminants. In addition, derivatives and reformulations of p-GlcNAc are described. The present invention further relates to methods for the purification of the p-GlcNAc of the invention from microalgae, preferably diatom, starting sources. Still further, the invention relates to methods for the derivatization and reformulation of the p-GlcNAc. Additionally, the present invention relates to the uses of pure p-GlcNAc, its derivatives, and/or its reformulations.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L5
     ANSWER 8 OF 19 USPATFULL on STN
ΑN
       2000:61727 USPATFULL
       Methods and compositions for treatment of cell proliferative disorders
TI
IN
       Vournakis, John N., Charleston, SC, United States
       Finkielsztein, Sergio, Chestnut Hill, MA, United States
       Pariser, Ernest R., Belmont, MA, United States
       Marine Polymer Technologies, Inc., Danvers, MA, United States (U.S.
PA
       corporation)
PΙ
       US 6063911
                               20000516
       US 1998-218288
                               19981222 (9)
AI
       Continuation-in-part of Ser. No. US 1995-471290, filed on 6 Jun 1995,
RLI
       now patented, Pat. No. US 5858350 which is a continuation-in-part of
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Ser. No. US 1994-347911, filed on 1 Dec 1994, now patented, Pat. No. US
       5623064 which is a continuation-in-part of Ser. No. US 1993-160569,
       filed on 1 Dec 1993, now patented, Pat. No. US 5622834
DT
       Utility
FS
       Granted
EXNAM
       Primary Examiner: Lankford, Jr., Leon B.; Assistant Examiner: Tate,
       Christopher R.
       Pennie & Edmonds LLP
LREP
       Number of Claims: 35
CLMN
ECL
       Exemplary Claim: 1
DRWN
       15 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 2018
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to methods and compositions comprising at
       least one endothelin antagonist, preferably in combination with a
       poly-.beta.-1.fwdarw.4-N-acetylglucosamine
       (p-GlcNAc) polysaccharide matrix, for use in the treatment of cancer and
       other proliferative diseases. The endothelin antagonist can be a peptide
       or non-peptide compound, and the p-GlcNAc matrix of the invention is
       comprised of a polymer of high molecular weight whose constituent
       monosaccharide sugars are attached in a .beta.-1.fwdarw.4 conformation,
       and which is free of proteins, and substantially free of single amino
       acids, and other organic and inorganic contaminants. The compositions
       and methods of the invention are useful for inhibiting the growth of
       tumors and other neoplastic cells and/or for inhibiting the metastasis
       of neoplastic cells in vivo.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L_5
     ANSWER 9 OF 19 USPATFULL on STN
       1999:4023 USPATFULL
AN
TT
       Methods and compositions for poly-.beta.-1.fwdarw.4-N
       -acetylglucosamine cell therapy system
       Vournakis, John N., Hanover, NH, United States
IN
       Finkielsztein, Sergio, Chestnut Hill, MA, United States
       Pariser, Ernest R., Belmont, MA, United States
       Helton, Mike, Memphis, TN, United States
       Marine Polymer Technologies, Danvers, MA, United States (U.S.
PA
       corporation)
PΙ
       US 5858350
                               19990112
       US 1995-471290
ΑI
                               19950606 (8)
       Continuation-in-part of Ser. No. US 1994-347911, filed on 1 Dec 1994,
RLI
       now patented, Pat. No. US 5623064 which is a continuation-in-part of
       Ser. No. US 1993-160569, filed on 1 Dec 1993, now patented, Pat. No. US
       5622834
DT
       Utility
       Granted
FS
EXNAM
       Primary Examiner: Lankford, Jr., Leon B.; Assistant Examiner: Tate,
       Christopher R.
       Pennie & Edmonds
LREP
       Number of Claims: 18
CLMN
       Exemplary Claim: 1
ECL
DRWN
       73 Drawing Figure(s); 58 Drawing Page(s)
LN.CNT 3953
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to a purified, easily produced
AB
       poly-.beta.-1.fwdarw.4-N-acetylglucosamine
       (p-GlcNAc) polysaccharide species. The p-GlcNAc of the invention is a
       polymer of high molecular weight whose constituent monosaccharide sugars
       are attached in a .beta.-1.fwdarw.4 conformation, and which is free of
       proteins, and substantially free of single amino acids, and other
       organic and inorganic contaminants. In addition, derivatives and
       reformulations of p-GlcNAc are described. The present invention further
```

relates to methods for the purification of the p-GlcNAc of the invention

from microalgae, preferably diatom, starting sources. Still further, the invention relates to methods for the derivatization and reformulation of the p-GlcNAc. Additionally, the present invention relates to the uses of pure p-GlcNAc, its derivatives, and/or its reformulations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
ANSWER 10 OF 19 USPATFULL on STN
L5
       1998:154260 USPATFULL
AN
       Methods and compositions for poly-.beta.-1-4-N-
ΤТ
       acetylglucosamine drug delivery
       Vournakis, John N., Hanover, NH, United States
IN
       Finkielsztein, Sergio, Chestnut Hill, MA, United States
       Pariser, Ernest R., Belmont, MA, United States
       Helton, Mike, Memphis, TN, United States
       Marine Polymer Technologies, Inc., Danvers, MA, United States (U.S.
PΑ
       corporation)
       US 5846952
                               19981208
PΙ
                               19950606 (8)
       US 1995-470077
AΙ
       Continuation-in-part of Ser. No. US 1994-347911, filed on 1 Dec 1994
RLI
       which is a continuation-in-part of Ser. No. US 1993-160569, filed on 1
       Dec 1993
DT
       Utility
       Granted
FS
       Primary Examiner: Kight, John; Assistant Examiner: Fonda, Kathleen
EXNAM
       Kahler
       Pennie & Edmonds
LREP
       Number of Claims: 18
CLMN
ECL
       Exemplary Claim: 1
       73 Drawing Figure(s); 58 Drawing Page(s)
DRWN
LN.CNT 4101
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to a purified, easily produced
AΒ
      poly-.beta.-1.fwdarw.4-N-acetylglucosamine
       (p-GlcNAc) polysaccharide species useful in drug compositions. The
       p-GlcNAc of the invention is a polymer of high molecular weight whose
       constituent monosaccharide sugars are attached in a .beta.1.fwdarw.4
       conformation, and which is free of proteins, and substantially free of
       single amino acids, and other organic and inorganic contaminants. In
       addition, derivatives and reformulations of p-GlcNAc are described. The
      present invention further relates to methods for the purification of the
      p-GlcNAc of the invention from microalgae, preferably diatom, starting
       sources. Still further, the invention relates to methods for the
       derivatization and reformulation of the p-GlcNAc. Additionally, the
      present invention relates to the uses of pure p-GlcNAc, its derivatives,
       and/or its reformulations.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
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L5
    ANSWER 11 OF 19 USPATFULL on STN
AN
       97:104147 USPATFULL
       Poly-.beta.-1.fwdarw.4-N-acetylucosamine copolymer composition
TI
       with collagen
IN
       Vournakis, John N., Hanover, NH, United States
       Finkielsztein, Sergio, Chestnut Hill, MA, United States
       Pariser, Ernest R., Belmont, MA, United States
       Helton, Mike, Memphis, TN, United States
       Marine Polymer Technologies, Inc., Danvers, MA, United States (U.S.
PA
       corporation)
                               19971111
PΙ
       US 5686115
                               19950606 (8)
AΙ
       US 1995-470912
       Continuation-in-part of Ser. No. US 1994-347911, filed on 1 Dec 1994,
RLI
       now patented, Pat. No. US 5623064 which is a continuation-in-part of
```

Ser. No. US 1993-160569, filed on 1 Dec 1993, now patented, Pat. No. US

5622834 Utility DT FS Granted Primary Examiner: Kight, John; Assistant Examiner: Fonda, Kathleen EXNAM Kahler Pennie & Edmonds LREP Number of Claims: 20 CLMN Exemplary Claim: 1 ECL 72 Drawing Figure(s); 58 Drawing Page(s) DRWN LN.CNT 4073 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention relates to a purified, easily produced poly-.beta.-1.fwdarw.4-N-acetylglucosamine (p-GlcNAc) polysaccharide species useful in collagen copolymers. The p-GlcNAc of the invention is a polymer of high molecular weight whose constituent monosaccharide sugars are attached in a .beta.-1.fwdarw.4 conformation, and which is free of proteins, and substantially free of single amino acids, and other organic and inorganic contaminants. In addition, derivatives and reformulations of p-GlcNAc are described. The present invention further relates to methods for the purification of the p-GlcNAc of the invention from microalgae, preferably diatom, starting sources. Still further, the invention relates to methods for the derivatization and reformulation of the p-GlcNAc. Additionally, the present invention relates to the uses of pure p-GlcNAc, its derivatives, and/or its reformulations. CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 12 OF 19 USPATFULL on STN L5 97:47398 USPATFULL AN Methods and compositions for poly-.beta.-1-4-N-TI acetylglucosamine chemotherapeutics Vournakis, John N., Hanover, NH, United States IN Finkielsztein, Sergio, Chestnut Hill, MA, United States Pariser, Ernest R., Belmont, MA, United States Helton, Mike, Memphis, TN, United States Marine Polymer Technologies, Inc., Danvers, MA, United States (U.S. PΑ corporation) US 5635493 19970603 PΙ US 1995-471545 19950606 (8) ΑI Continuation-in-part of Ser. No. US 1994-347911, filed on 1 Dec 1994 RLI which is a continuation-in-part of Ser. No. US 1993-160569, filed on 1 Dec 1993 DT Utility FS Granted Primary Examiner: Kight, John; Assistant Examiner: Fonda, Kathleen EXNAM Kahler LREP Pennie & Edmonds Number of Claims: 16 CLMN ECLExemplary Claim: 1 73 Drawing Figure(s); 58 Drawing Page(s) DRWN LN.CNT 3937 CAS INDEXING IS AVAILABLE FOR THIS PATENT. ABThe present invention relates to a purified, easily produced poly-.beta.-1.fwdarw.4-N-acetylglucosamine (p-GlcNAc) polysaccharide species useful in drug compositions. The p-GlcNAc of the invention is a polymer of high molecular weight whose constituent monosaccharide sugars are attached in a .beta.-1.fwdarw.4 conformation, and which is free of proteins, and substantially free of single amino acids, and other organic and inorganic contaminants. In addition, derivatives and reformulations of p-GlcNAc are described. The present invention further relates to methods for the purification of the

p-GlcNAc of the invention from microalgae, preferably diatom, starting

sources. Still further, the invention relates to methods for the

derivatization and reformulation of the p-GlcNAc. Additionally, the present invention relates to the uses of pure p-GlcNAc, its derivatives, and/or its reformulations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Pennie & Edmonds

LREP

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ANSWER 13 OF 19 USPATFULL on STN
L5
       97:35944 USPATFULL
AN
      Methods and compositions for poly-.beta.-1-4-N-
TI
       acetylglucosamine biological barriers
      Vournakis, John N., Hanover, NH, United States
IN
       Finkielsztein, Sergio, Chestnut Hill, MA, United States
      Pariser, Ernest R., Belmont, MA, United States
      Helton, Mike, Memphis, TN, United States
      Marine Polymer Technologies, Inc., Danvers, MA, United States (U.S.
PA
      corporation)
                               19970429
      US 5624679
PI
      US 1995-470083
                               19950606 (8)
AΙ
      Continuation-in-part of Ser. No. US 1994-347911, filed on 1 Dec 1994
RLI
      which is a continuation-in-part of Ser. No. US 1993-160569, filed on 1
      Dec 1993
      Utility
DT
FS
      Granted
      Primary Examiner: Kight, John; Assistant Examiner: Fonda, Kathleen
EXNAM
      Kahler
      Pennie & Edmonds
LREP
      Number of Claims: 14
CLMN
      Exemplary Claim: 1
ECL
      74 Drawing Figure(s); 58 Drawing Page(s)
DRWN
LN.CNT 4072
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
      The present invention relates to a purified, easily produced
AΒ
      poly-.beta.-1.fwdarw.4-N-acetylglucosamine
       (p-GlcNAc) polysaccharide species. The p-GlcNAc of the invention is a
      polymer of high molecular weight whose constituent monosaccharide sugars
       are attached in a .beta.-1.fwdarw.4 conformation, and which is free of
      proteins, and substantially free of single amino acids, and other
       organic and inorganic contaminants. In addition, derivatives and
      reformulations of p-GlcNAc are described. The present invention further
      relates to methods for the purification of the p-GlcNAc of the invention
       from microalgae, preferably diatom, starting sources. Still further, the
       invention relates to methods for the derivatization and reformulation of
       the p-GlcNAc. Additionally, the present invention relates to the uses of
      pure p-GlcNAc, its derivatives, and/or its reformulations.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
    ANSWER 14 OF 19 USPATFULL on STN
L_5
AN
       97:33859 USPATFULL
       Poly-.beta.-1.fwdarw.-4-N-acetylglucosamine
TI
       Vournakis, John N., Hanover, NH, United States
IN
       Finkielsztein, Sergio, Chestnut Hill, MA, United States
       Pariser, Ernest R., Belmont, MA, United States
       Helton, Mike, Memphis, TN, United States
      Marine Polymer Technologies, Inc., Danvers, MA, United States (U.S.
PA
       corporation)
                               19970422
      US 5623064
PΙ
                               19941201 (8)
       US 1994-347911
AΙ
       Continuation-in-part of Ser. No. US 1993-160569, filed on 1 Dec 1993
RLI
DT
       Granted
FS
       Primary Examiner: Kight, John; Assistant Examiner: Fonda, Kathleen
EXNAM
       Kahler
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Number of Claims: 36
CLMN
       Exemplary Claim: 1
ECL
       71 Drawing Figure(s); 56 Drawing Page(s)
DRWN
LN.CNT 3532
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to a purified, easily produced
       poly-.beta.-1.fwdarw.4-N-acetylglucosamine
       (p-GlcNAc) polysaccharide species. The p-GlcNAc of the invention is a
       polymer of high molecular weight whose constituent monosaccharide sugars
       are attached in a .beta.-1.fwdarw.4 conformation, and which is free of
       proteins, and substantially free of single amino acids, and other
       organic and inorganic contaminants. In addition, derivatives and
       reformulations of p-GlcNAc are described. The present invention further
       relates to methods for the purification of the p-GlcNAc of the invention
       from microalgae, preferably diatom, starting sources. Still further, the
       invention relates to methods for the derivatization and reformulation of
       the p-GlcNAc. Additionally, the present invention relates to the uses of
       pure p-GlcNAc, its derivatives, and/or its reformulations.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 15 OF 19 USPATFULL on STN
L5
       97:33629 USPATFULL
ΑN
       Method of isolating poly-.beta.-1-4-N-
ΤI
       acetylglucosamine from microalgal culture
       Vournakis, John N., Hanover, NH, United States
IN
       Finkielsztein, Sergio, Chestnut Hill, MA, United States
       Pariser, Ernest R., Belmont, MA, United States
       Helton, Mike, Memphis, TN, United States
       Marine Polymer Technologies, Inc., Danvers, MA, United States (U.S.
PΑ
       corporation)
       US 5622834
                               19970422
PΙ
                               19931201 (8)
AΙ
       US 1993-160569
DT
       Utility
FS
      Primary Examiner: Kight, John; Assistant Examiner: Fonda, Kathleen
EXNAM
       Kahler
       Pennie & Edmonds
LREP
       Number of Claims: 18
CLMN
       Exemplary Claim: 1
ECL
       17 Drawing Figure(s); 34 Drawing Page(s)
DRWN
LN.CNT 1941
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to a purified, easily produced
AB
       poly-.beta.-1.fwdarw.4-N-acetylglucosamine
       (p-GlcNAc) polysaccharide species. The p-GlcNAc of the invention is a
       polymer of high molecular weight whose constituent monosaccharide sugars
       are attached in a .beta.-1.fwdarw.4 conformation, and which is free of
       proteins, and substantially free of single amino acids, and other
       organic and inorganic contaminants. In addition, derivatives and
       reformulations of p-GlcNAc are described. The present invention further
       relates to methods for the purification of the p-GlcNAc of the invention
       from microalgae, preferably diatom, starting sources. Still further, the
       invention relates to methods for the derivatization and reformulation of
       the p-GlcNAc. Additionally, the present invention relates to the uses of
       pure p-GlcNAc, its derivatives, and/or its reformulations.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L5
     ANSWER 16 OF 19 USPAT2 on STN
       2002:198691 USPAT2
AN
```

Methods and compositions for poly-.beta.-1-4-N-

Vournakis, John N., Hanover, NH, United States

acetylglucosamine cell therapy system

TI

IN

Finkielstein, Sergio, Chestnut Hill, MA, United States Pariser, Ernest R., Belmont, MA, United States Helton, Mike, Memphis, TN, United States Marine Polymer Technologies, Inc., Danvers, MA, United States (U.S. PAcorporation) 20031118 В2 US 6649599 PΙ 20011205 (10) US 2001-5130 ΑI Continuation of Ser. No. US 2001-866827, filed on 29 May 2001 Continuation of Ser. No. US 1999-227840, filed on 11 Jan 1999, now RLI abandoned Division of Ser. No. US 1995-471290, filed on 6 Jun 1995, now patented, Pat. No. US 5858350 Continuation-in-part of Ser. No. US 1994-347911, filed on 1 Dec 1994, now patented, Pat. No. US 5623064 Continuation-in-part of Ser. No. US 1993-160569, filed on 1 Dec 1993, now patented, Pat. No. US 5622834 DT Utility FS GRANTED Primary Examiner: Fonda, Kathleen K. EXNAM Pennie & Edmonds LLP LREP Number of Claims: 4 CLMN Exemplary Claim: 1 ECL 73 Drawing Figure(s); 57 Drawing Page(s) CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention relates to a purified, easily produced poly-.beta.-1.fwdarw.4-N-acetylglucosamine (p-GlcNAc) polysaccharide species. The p-GlcNAc of the invention is a polymer of high molecular weight whose constituent monosaccharide sugars are attached in a .beta.-1.fwdarw.4 conformation, and which is free of proteins, and substantially free of single amino acids, and other organic and inorganic contaminants. In addition, derivatives and reformulations of p-GlcNAc are described. The present invention further relates to methods for the purification of the p-GlcNAc of the invention from microalgae, preferably diatom, starting sources. Still further, the invention relates to methods for the derivatization and reformulation of the p-GlcNAc. Additionally, the present invention relates to the uses of pure p-GlcNAc, its derivatives, and/or its reformulations. CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 17 OF 19 USPAT2 on STN T<sub>2</sub>5 2002:185666 USPAT2 AN Methods for making poly-.beta.-1.fwdarw.4-N-TIacetylglucosamine Vournakis, John N., Hanover, NH, United States IN Finkielsztein, Sergio, Chestnut Hill, MA, United States Pariser, Ernest R., Belmont, MA, United States Helton, Mike, Memphis, TN, United States Marine Polymer Technologies, Danvers, MA, United States (U.S. PA corporation) 20030729 PΙ US 6599720 B2 US 2001-5139 20011205 (10) ΑI Continuation of Ser. No. US 2001-866827, filed on 29 May 2001 RLI Continuation of Ser. No. US 1999-227840, filed on 11 Jan 1999, now abandoned Division of Ser. No. US 1995-471290, filed on 6 Jun 1995, now patented, Pat. No. US 5858350 Continuation-in-part of Ser. No. US 1994-347911, filed on 1 Dec 1994, now patented, Pat. No. US 5623064 Continuation-in-part of Ser. No. US 1993-160569, filed on 1 Dec 1993, now patented, Pat. No. US 5622834 Utility DTFS GRANTED Primary Examiner: Fonda, Kathleen K. EXNAM Pennie & Edmonds LLP LREP

Number of Claims: 2

Exemplary Claim: 1

CLMN

ECL

73 Drawing Figure(s); 57 Drawing Page(s) LN.CNT 3683 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention relates to a purified, easily produced poly-.beta.-1.fwdarw.4-N-acetylglucosamine (p-GlcNAc) polysaccharide species. The p-GlcNAc of the invention is a polymer of high molecular weight whose constituent monosaccharide sugars are attached in a .beta.-1.fwdarw.4 conformation, and which is free of proteins, and substantially free of single amino acids, and other organic and inorganic contaminants. In addition, derivatives and reformulations of p-GlcNAc are described. The present invention further relates to methods for the purification of the p-GlcNAc of the invention from microalgae, preferably diatom, starting sources. Still further, the invention relates to methods for the derivatization and reformulation of the p-GlcNAc. Additionally, the present invention relates to the uses of pure p-GlcNAc, its derivatives, and/or its reformulations. CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 18 OF 19 USPAT2 on STN L5 2002:172344 USPAT2 AN Pharmaceutical compositions comprising poly-.beta.-1.fwdarw.4-TI N-acetylglucosamine Vournakis, John N., Hanover, NH, United States IN Finkielsztein, Sergio, Chestnut Hill, MA, United States Pariser, Ernest R., Belmont, MA, United States Helton, Mike, Memphis, TN, United States Marine Polymers Technologies, Danvers, MA, United States (U.S. PΑ corporation) 20031007 PΙ US 6630459 B2 20011205 (10) US 2001-5142 ΑI Continuation of Ser. No. US 2001-866827, filed on 29 May 2001 RLI Continuation of Ser. No. US 1999-227840, filed on 11 Jan 1999, now abandoned Division of Ser. No. US 1995-471290, filed on 6 Jun 1995, now patented, Pat. No. US 5858350 Continuation-in-part of Ser. No. US 1994-347911, filed on 1 Dec 1994, now patented, Pat. No. US 5623064 Continuation-in-part of Ser. No. US 1993-160569, filed on 1 Dec 1993, now patented, Pat. No. US 5622834 Utility DTGRANTED FS Primary Examiner: Fonda, Kathleen K. EXNAM LREP Pennie & Edmonds LLP CLMN Number of Claims: 5 Exemplary Claim: 1 ECL 73 Drawing Figure(s); 58 Drawing Page(s) DRWN LN.CNT 3641 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention relates to a purified, easily produced AΒ poly-.beta.-1.fwdarw.4-N-acetylglucosamine (p-GlcNAc) polysaccharide species. The p-GlcNAc of the invention is a polymer of high molecular weight whose constituent monosaccharide sugars are attached in a .beta.-1.fwdarw.4 conformation, and which is free of proteins, and substantially free of single amino acids, and other organic and inorganic contaminants. In addition, derivatives and reformulations of p-GlcNAc are described. The present invention further relates to methods for the purification of the p-GlcNAc of the invention from microalgae, preferably diatom, starting sources. Still further, the invention relates to methods for the derivatization and reformulation of the p-GlcNAc. Additionally, the present invention relates to the uses of pure p-GlcNAc, its derivatives, and/or its reformulations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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2001:237691 USPAT2
ΑN
       Methods and compositions for poly-.beta.-1.fwdarw.4-N
ΤI
       -acetylglucosamine cell therapy system
       Vournakis, John N., Hanover, NH, United States
IN
       Finkielsztein, Sergio, Chestnut Hill, MA, United States
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       US 6610668
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PΤ
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       US 2001-866827
                               20010529 (9)
ΑI
       Continuation of Ser. No. US 1999-227840, filed on 11 Jan 1999, now
RLI
       abandoned Division of Ser. No. US 1995-471290, filed on 6 Jun 1995, now
       patented, Pat. No. US 5858350 Continuation-in-part of Ser. No. US
       1994-347911, filed on 1 Dec 1994, now patented, Pat. No. US 5623064
       Continuation-in-part of Ser. No. US 1993-160569, filed on 1 Dec 1993,
       now patented, Pat. No. US 5622834
DТ
       Utility
FS
       GRANTED
EXNAM
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LREP
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CLMN
       Number of Claims: 2
ECL
       Exemplary Claim: 1
DRWN
       73 Drawing Figure(s); 58 Drawing Page(s)
LN.CNT 3682
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to a purified, easily produced
AΒ
       poly-.beta.-1.fwdarw.4-N-acetylglucosamine
       (p-GlcNAc) polysaccharide species. The p-GlcNAc of the invention is a
       polymer of high molecular weight whose constituent monosaccharide sugars
       are attached in a .beta.-1.fwdarw.4 conformation, and which is free of
       proteins, and substantially free of single amino acids, and other
       organic and inorganic contaminants. In addition, derivatives and
       reformulations of p-GlcNAc are described. The present invention further
       relates to methods for the purification of the p-GlcNAc of the invention
       from microalgae, preferably diatom, starting sources. Still further, the
       invention relates to methods for the derivatization and reformulation of
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CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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FILE 'APOLLIT, BABS, CAPLUS, CBNB, CEN, CIN, DISSABS, EMA, IFIPAT, JICST-EPLUS, PASCAL, PLASNEWS, PROMT, RAPRA, SCISEARCH, TEXTILETECH, USPATFULL, USPAT2, WPINDEX, WTEXTILES, BIOSIS, EMBASE, MEDLINE' ENTERED AT 16:20:27 ON 28 NOV 2003

the p-GlcNAc. Additionally, the present invention relates to the uses of

pure p-GlcNAc, its derivatives, and/or its reformulations.

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L1 37564 S N-ACETYLGLUCOSAMINE
L2 2294 S L1 AND POLY
L3 430 S L2 AND BIOCOMPAT?
L4 72 S L3 AND DEACETYL?
L5 19 S L4 AND (ELUTION(W)TEST)
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